



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/046,273	01/16/2002	Ulrich Kaczynski	016790-0450	3526
22428	7590	04/13/2004	EXAMINER	
FOLEY AND LARDNER SUITE 500 3000 K STREET NW WASHINGTON, DC 20007			VERBITSKY, GAIL KAPLAN	
			ART UNIT	PAPER NUMBER
			2859	

DATE MAILED: 04/13/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/046,273	Applicant(s) KACZYNSKI, ULRICH	
	Examiner Gail Verbitsky	Art Unit 2859	<i>pw</i>

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on December 16, 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 10-17 and 22-24-38 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 10-15, 17, 22, 24-32, 34-38 is/are rejected.
- 7) ☒ Claim(s) 16 and 33 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 10-14, 22, 24, 27-31, 35 are rejected under 35 U.S.C. 103(a) as being unpatentable over Skuratovsky (U.S. 4792206).

Skuratovsky discloses in Fig. 1 a device/ sensor/ machine comprising a housing part (fixed member) 30 to which a protruding component/ optical element 12 is connected/ supported/ protrudes. The device also comprises an impact detection element A which is displaceable (structure 24 and movable body, col. 3, line 4, not shown), a light source 42 coupled to the housing part 30 by means of the protruding/ optical element 12, the housing part 30 defining an emission surface, a receiving element 14 coupled to the impact detection element A. The impact detection element A is coupled/ movably connected to the housing part. The receiving element also coupled to the housing part by means of 24 wherein the housing part defining a receiving surface 38 opposite to the emission surface 34 of the light source 42. When the impact detection A element is not moved (no collision/ impact to the impact detection element), the emission and receiving surfaces are aligned, and the light is transmitted from the emission surface to the receiving surface.

Art Unit: 2859

Since the light receiver 46 receives transmitted light and determines its intensity, in a broad sense, it is considered that the light receiver 46 is an intensity sensor.

For claims 10-11, 13: a housing part 50 to which a protruding element 12 is connected/ protrudes, an impact detection element A comprising a movable body as described in col. 3, line 4 and moveable structure/ rod 24, a light source 42 coupled to the housing part by means of the protruding component 12, a receiving element 14 coupled to the impact detection element A defining a receiving surface which is opposite to the emission surface of the light source 42. The emission surface 34 and the receiving surface 38 are of substantially the same size. The device also comprises an intensity sensor/ light receiver 46.

For claims 10-14: a housing part 30 to which a protruding element 14 is connected/ protrudes by means of an impact detection element A comprising a movable body as described in col. 3, line 4 and moveable structure/ rod 24. the impact detection element A at least partially surrounds the protruding component 14; a light source 42 coupled to the housing part 30 by means of the protruding component 14, a receiving element/ light receiver 46 coupled to the impact detection element A by means of the protruding element 12 and defining a receiving surface which is opposite to the emission surface of the light source 42. The emission surface 34 and the receiving surface 38 are of substantially the same size. The device also comprises an intensity sensor/ light receiver 46. The light source 42 comprises at least one light guided fiber 12, and the emission surface is defined by the end of the light-guided fiber 12.

Art Unit: 2859

For claims 27-31: a housing part 30 to which a protruding element 14 is connected/ protrudes by means of an impact detection element A comprising a movable body as described in col. 3, line 4 and moveable structure/ rod 24. The impact detection element A at least partially surrounds the protruding component 14; a light source 42 coupled to the housing part 30 by means of the protruding component 14, a receiving element/ light receiver 46 coupled to the housing part 30 by means of the structure 24 and structure 18 and defining a receiving surface which is opposite to the emission surface of the light source 42. The emission surface 34 and the receiving surface 38 are of substantially the same size. The device also comprises an intensity sensor/ light receiver 46. The light source 42 comprises at least one light guided fiber 12, and the emission surface is defined by the end of the light-guided fiber 12. The receiving surface 38 directs light emitted by the emission surface 34 onto at least one light guiding fiber 44 connected to the intensity sensor 46. Thus, the intensity sensor 46 is associated with the receiving surface 38.

With respect to the preamble of claims 10, 27: the preamble of the claim has not provided enough patentable weight because it has been held that a preamble is denied the effect of a limitation where the claim is drawn to a structure and the portion of the claim following the preamble is a self-contained description of the structure not depending for completeness upon the introductory clause. *Kopa v. Tobie*, 88 USPQ 478 (CCPA 1951).

For claims 11, 22, 28, 35: With respect to the particular light path (length) between the emission and receiving surface, that is smaller than a cross section of the receiving and

Art Unit: 2859

emission surface, as stated in claims 11, 22, 28, 35, the particular light path (length/size), absent any criticality, is only considered to be the "optimum value" of the light path length disclosed by Reimer that a person having ordinary skill in the art would have been able to determine using routine experimentation based, among other things, on the desired accuracy of the device, etc. In re Boesch, 205 USPQ 215 (CCPA 1980).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to make the length of the light path, disclosed by Skuratovsky, less than the cross section of the emission surface, so as to minimize loss of the signal, and thus, to achieve a desired accuracy of the device.

3. Claim 15, 32 are rejected under 35 U.S.C. 103(a) as being unpatentable over Skuratovsky as applied to claims 10-14, 22, 24, 27-31, 35 above, in view of GB 2185359 A [hereinafter GB].

Skuratovsky discloses the device as stated above in paragraph 2.

Skuratovsky does not explicitly disclose that the receiver has a reflective surface to direct the light to the at least one optical fiber, as stated in claims 15, 32.

GB teaches in Fig. 1 a device whose receiver (6, 15, 4) having a reflective surface (mirror) 4 directing (reflecting) a light illuminated (emitted) from a fiber (light source) 7 onto a receiving fiber 6 of a receiver 15.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to add a reflective surface (mirror) as taught by GB, to the

Art Unit: 2859

device, disclosed by Skuratovsky, so as to direct the emitted radiation directly onto a transmitting fiber and eliminate losses of the radiation.

4. Claims 24-26 and 36-38 are rejected under 35 U.S.C. 103(a) as being unpatentable over Skuratovsky as applied to claims 10-14, 22, 24, 27-31, 35 above, and further in view of Eno (U.S. 5422969).

Skuratovsky teaches the device as stated above in paragraph 2.

Skuratovsky does not explicitly teach to not transmit light when there is a displacement/ collision.

Eno teaches that light is transmitted when emitting and receiving optical cables are aligned, and not transmitted when they are displaced.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the device disclosed by Skuratovsky, so as to allow the light to be transmitted when the optical cable are aligned and not transmitted when the optical cables are not aligned, so as to transmit data only incase if everything operate normally.

With respect to the preamble of claims 24, 26, 36, 38: the preamble of the claim has not provided enough patentable weight because it has been held that a preamble is denied the effect of a limitation where the claim is drawn to a structure and the portion of the claim following the preamble is a self-contained description of the structure not depending for completeness upon the introductory clause. Kopa v. Tobie, 88 USPQ 478 (CCPA 1951).

5. Claims 17, 34 are rejected under 35 U.S.C. 103(a) as being unpatentable over Skuratovsky as applied to claims 10-14, 22, 24, 27-31, 35 above, and further in view of Lord (U.S. 5502301).

Skuratovsky discloses the device as stated above in paragraph 2.

Skuratovsky does not explicitly teach the particular intensity sensor as stated in claims 17 and 34.

Lord discloses a device in the filed of applicant's endeavor comprising a comparator/ intensity sensor which generates an (electrical) input signal in response to a sensed output signal/ power of the output signal, thus, providing a control loop.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the intensity sensor in the device disclosed by Skuratovsky, so as to provide a loop control, as taught by Lord, so as to allow the operator to correct the displacement before permanent damage occurs.

Allowable Subject Matter

7. Claims 16, 33 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Response to Arguments

Art Unit: 2859

8. Applicant's arguments with respect to claims 10-17, 22, 24-38 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

9. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. The prior art cited in the PTO-892 and not mentioned above disclose related devices and methods.

Any inquiry concerning this communication should be directed to the Examiner Verbitsky who can be reached at (571) 272-2253 Monday through Friday 8:00 to 4:00 ET.

GKV

Gail Verbitsky

Primary Patent Examiner, TC 2800



March 23, 2004